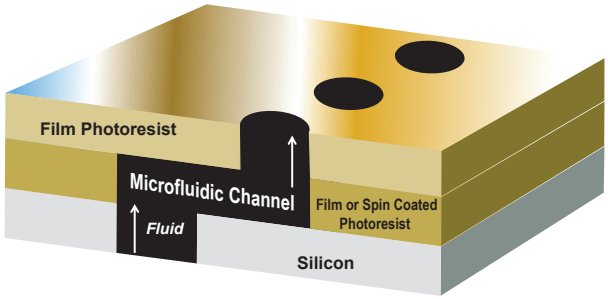
Liquid and Dry Film Resists, Adhesion Promoters



- **Microfluidics**
- **Via Sealing**
- **Metalization**
- **IC Cooling**

Liquid Photoresists for Spin Coating

Material	Standard Thickness?	Achievable Thickness (µ)	Storage Modulus @ 25ºC (GPa)	T_g TAN δ (ºC)	Operating Temperature (ºC)	Target Energy (mJ/cm²)	Maximum Aspect Ratio
NR-2500	Yes	12-25	4.5	165	-60 to 200	160	8:01
NR-2300	No	8-14	4.5	165	-60 to 200	120	6:01
NR-2200	No	5-10	4.5	165	-60 to 200	80	4:01
NR-2050	No	2-4	4.5	165	-60 to 200	60	1:01

Nagase ChemteX Dry Films exhibit high hydrophobicity and chemical resistance, excellent tenting properties, exceptional resolution, and good adhesion to a variety of substrates. They find use in permanent MEMS applications and some etch applications where high aspect ratio/resolutions is required.

Dry Film Negative Tone Photoresist

Material	Chemistry	T_g TAN δ (ºC)	H_2O Contact Angle θ_C (°)	Color	Minimum Resolution 20u film (µ)	Aspect Ratio, Max with 20µ film	Available Thickness ** (µ)	Image, I-Line, 365nm, 20µ film (mJ/cm²)
DF-1000 Series	Epoxy/Sb catalyst	180	75	Clear	3	8:01	5-100	175
DF-2000 Series Consistent Photospeed	Epoxy/Sb catalyst	180	73	Green	3	8:01	5-75	90
DF-3000 Series Sb free, Low stress	Epoxy/non-Sb catalyst	130	74	Tan	4-5	5:01	5-75	120
DF-3500 Series Sb-free (Similar to 2000 series)	Epoxy/non-Sb catalyst	180	74	Green	4	8:01	5-75	150
DF-4000 Series, Extremely hydrophobic dual layer film	Epoxy/Sb catalyst	180	95	Green	3	8:01	5-75	90

** Not all film thicknesses within the range are available. Please inquire on current standard thickness; we can make other thicknesses within range if volume justifies

Adhesion Promoters

412-17	Silane based Adhesion Promoter distilled to high purity at Nagase ChemteX to enable higher adhesion of the Photoresists to themselves and other substrates